



# ONDCP

Drug Policy Information Clearinghouse

## FACT SHEET

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# Gamma Hydroxybutyrate (GHB)

## Background Information

Gamma Hydroxybutyrate (GHB) is a powerful and rapidly acting central nervous system depressant, which was first synthesized in the 1960s. It is produced naturally by the body in small amounts but its physiological function is unclear. GHB was once sold in health food stores as a performance-enhancing additive in bodybuilding formulas. Currently, GHB is created primarily in clandestine laboratories with no guarantee of quality or purity, making its effects less predictable and increasingly difficult to diagnose. According to the National Institute on Drug Abuse's Community Epidemiology Work Group (CEWG), the illicit use of GHB is characterized by its consumption in combination with alcohol by young adults and teens at night clubs and parties. GHB is reportedly taken primarily by younger users as a pleasure enhancer that depresses the central nervous system, thereby inducing an intoxicated state. It can also be used as a sedative both to reduce the effects of stimulants (cocaine, methamphetamine, and ephedrine) or hallucinogens (LSD, mescaline) and to prevent physical withdrawal symptoms.

## Use and Effects

GHB is most commonly consumed orally, either as a grainy, white- or sandy-colored powder that is often dissolved in water or alcohol, or as a liquid sold in vials or small bottles. GHB is typically consumed by the capful or teaspoonful, which usually costs \$5 to \$10 per dose. The average dose consumed is 1 to 5 grams. Onset of effects occurs in 15 to 30 minutes, depending on the dosage and purity, and lasts from 3 to 6 hours. With consumption of less than 1 gram, GHB acts as a relaxant, causing a loss of muscle tone and a reduction of inhibitions. With consumption of 1 to 2 grams, GHB causes a strong feeling of relaxation while slowing the heart rate and respiration. It also interferes with circulation, motor coordination, and balance. In stronger doses (2 to 4 grams), pronounced interference with motor and speech control occurs. A deep sleep,

resembling a coma, may be induced, requiring intubation to awake the user. Possible side effects associated with GHB are nausea, vomiting, delusions, depression, vertigo, hallucinations, seizures, respiratory distress, loss of consciousness, slowed heart rate, lowered blood pressure, amnesia, and coma. GHB may cause addiction and dependence with sustained use. Frequently during the clandestine production of GHB, too much of an acid solution is added to the mixture, which can cause severe esophageal erosion in users.

## Marketing and Sales

Kits containing chemicals and "recipes" for making GHB are available on the Internet and are marketed for many uses. GHB is advertised as an antidepressant that suppresses feelings of depression and anxiety. It is also promoted and sold on the Internet and on the steroid black market as an alternate to anabolic steroids for strength training, body building, and weight control. The claims that GHB functions as an antidepressant and that it increases muscle mass and reduces body fat by stimulating the production of growth hormones has never been substantiated by the U.S. Food and Drug Administration (FDA). GHB kits contain nonregulated precursor chemicals, which are marketed as legal health enhancers, under numerous pseudonyms, including Sodium Oxybate, Sodium Oxybutyrate, Gamma Hydroxybutyric Sodium Acid, Gamma Hydroxybutyric Sodium, Gamma-OH, 4-Hydroxybutyrate, Gamma Hydrate, Somatomax PM, Somasnit, and Gamma Hidroxibutirato. The FDA has declared any substance containing GHB in any form to be an unapproved drug. Since 1997, the Drug Enforcement Administration has investigated more than 100 clandestine GHB manufacturing labs.

## Observations

According to the Drug Abuse Warning Network, GHB-related emergency room visits nationwide increased

### Estimated number of emergency department GHB mentions in the United States and in selected metropolitan areas,<sup>\*</sup> 1992–1998 (mid-year)

Year	1992	1993	1994	1995	1996	1997	Mid-year 1998
<b>Total</b>	20	38	55	145	638	762	385

Sources: *Annual Emergency Department Data 1992, 1993, 1994, 1995, 1996, 1997 and Mid-Year 1998 Preliminary Emergency Department Data from the Drug Abuse Warning Network.*

<sup>\*</sup>The selected metropolitan areas include Atlanta, Georgia; Baltimore, Maryland; Boston, Massachusetts; Chicago, Illinois; Dallas, Texas; Detroit, Michigan; Los Angeles/Long Beach, California; Miami/Hialeah, Florida; Minneapolis/St. Paul, Minnesota; New Orleans, Louisiana; New York, New York; San Diego/San Francisco, California; St. Louis, Missouri; and Washington, D.C.

### Emergency department visits in the United States and in selected metropolitan areas,<sup>\*</sup> 1992–1998 (mid-year) (by selected characteristics)

Age	1992	1993	1994	1995	1996	1997	Mid-year 1998
6–17	–	–	–	–	14	27	10
18–25	–	22	26	80	427	475	223
26–34	–	12	25	60	163	201	126
35+	–	–	–	–	30	58	25
<b>Gender</b>							
Male	–	15	29	94	506	530	190
Female	14	21	20	51	125	228	195
<b>Race/Ethnicity</b>							
Caucasian	28	25	46	104	336	370	251
Black	–	–	–	–	–	–	15
Hispanic	–	–	–	16	15	16	11
Other/Unknown	–	–	–	17	280	368	108

Sources: *Annual Emergency Department Data 1992, 1993, 1994, 1995, 1996, 1997 and Mid-Year 1998 Preliminary Emergency Department Data from the Drug Abuse Warning Network.*

<sup>\*</sup>The selected metropolitan areas include Atlanta, Georgia; Baltimore, Maryland; Boston, Massachusetts; Chicago, Illinois; Dallas, Texas; Detroit, Michigan; Los Angeles/Long Beach, California; Miami/Hialeah, Florida; Minneapolis/St. Paul, Minnesota; New Orleans, Louisiana; New York, New York; San Diego/San Francisco, California; St. Louis, Missouri; and Washington, D.C.

from 20 in 1992 to 762 in 1997. The majority of the episodes occurred among 18- to 25-year-olds (62 percent) and males (70 percent). In 57 percent of these emergency department visits, recreational use was listed as the reason for taking the drug. Nationally, more than 900 GHB incidents were reported to poison control centers in 1997.

## Legal Status

Since 1990 the FDA has issued four advisories declaring GHB unsafe and illicit unless consumed under FDA-approved, physician-supervised protocols, due to the documented severe and uncontrollable side effects

reported by past users. The Drug Induced Rape Prevention and Punishment Act of 1996 was enacted into Federal law in response to the abuse of Rohypnol, another abused sedative—with a potency about 10 times the strength of Valium—that produces similar debilitating effects. The law makes it a crime to give someone a controlled substance without his or her knowledge and with the intent to commit a crime. In 1997, because of the increasing number of reported uses and overdoses, the FDA reissued a warning against the use of GHB, reiterating that the drug is not approved for any use.

## Scheduling

GHB is not a controlled substance under the Federal Controlled Substances Act, but is currently under review. Because of its increasing popularity and association with sexual assault and robbery, however, GHB has been controlled by numerous State legislatures. Several other States have implemented criminal sanctions for the possession of GHB even though the substance has not been controlled by their State legislatures.

### Schedule controls

<b>Schedule I control:</b>	Alabama, Arkansas, Delaware, Georgia, Hawaii, Idaho, Illinois, Michigan, Nebraska, Nevada, Oklahoma, Rhode Island, and Wisconsin.
<b>Schedule II control:</b>	California, Florida, Indiana, Louisiana, and New Hampshire.
<b>Schedule III control:</b>	Minnesota, New Jersey, and South Dakota.
<b>Schedule IV control:</b>	Alaska, Connecticut, North Carolina, and Tennessee.

Source: *Gamma Hydroxybutyrate (GHB)*, September 1999.

### Slang terms

Cherry Meth	Georgia Home Boy	Salty Water
Date Rape Drug	Grievous Bodily Harm	Scoop
Easy Lay	G-riffick	Soap
Fantasy	Liquid E	Somatomac
Gamma 10	Liquid X	Zonked
GBH	Organic Quaalude	

Source: *Street Terms: Drugs and the Drug Trade*, April 1998.

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This fact sheet was prepared by Lesley Chickering Flaim at the ONDCP Drug Policy Information Clearinghouse. The data presented are as accurate as the sources from which they were drawn. Responsibility for data selection and presentation rests with the Clearinghouse staff. The Clearinghouse is funded by the White House Office of National Drug Control Policy to support drug control policy research. The Clearinghouse is a component of the National Criminal Justice Reference Service (NCJRS). For further information about the contents or sources used for the production of this fact sheet or about other drug policy issues, call:

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